

CLAIMS

What is claimed is:

- 1 1. A method comprising:
2 forming a thin, flexible substrate having a conductor region adapted to
3 mount an integrated circuit;
4 forming a plurality of traces in the conductor region; and
5 forming a plurality of lands coupled to the traces.
- 1 2. The method recited in claim 1, wherein the substrate is formed of material
2 from the group comprising a polymeric film, polyimide, polyester, polyparabanic
3 acid, epoxy, and fiberglass.
- 1 3. The method recited in claim 1, wherein forming the substrate comprises
2 forming a plurality of layers, each comprising a plurality of traces in the conductor
3 region.
- 1 4. The method recited in claim 1, wherein forming the substrate comprises
2 forming a plurality of sprocket holes outside the conductor region.
- 1 5. The method recited in claim 1, wherein the lands are arranged in a ball grid
2 array, the method further comprising:
3 forming solder balls on the plurality of lands.
- 1 6. A method comprising:
2 forming a thin, flexible substrate having a conductor region comprising a
3 plurality of traces and a plurality of lands coupled to the plurality of traces; and
4 coupling pads on an integrated circuit (IC) to corresponding lands on the
5 substrate.

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1 7. The method recited in claim 6, wherein the substrate is formed of material
2 from the group comprising a polymeric film, polyimide, polyester, polyparabanic
3 acid, epoxy, and fiberglass.

1 8. The method recited in claim 6, wherein forming the substrate comprises
2 forming a plurality of layers, each comprising a plurality of traces in the conductor
3 region.

1 9. The method recited in claim 6, wherein forming the substrate comprises
2 forming a plurality of sprocket holes outside the conductor region.

1 10. The method recited in claim 6 and further comprising before coupling:
2 forming solder balls on the lands.

1 11. The method recited in claim 6 and further comprising:
2 mounting the substrate on an additional substrate.

1 12. The method recited in claim 11, wherein the additional substrate comprises
2 a printed circuit board.

1 13. The method recited in claim 11, wherein lands are coupled to corresponding
2 terminals on the additional substrate.

1 14. The method recited in claim 12 and further comprising before mounting:
2 forming solder balls on the lands.

1 15. The method recited in claim 12, wherein the lands are coupled to the
2 terminals using a ball grid array.

SUB D7 16. The method recited in claim 12, wherein leads are coupled between corresponding lands and terminals. /a

SUB A1 17. An electronic package substrate comprising:
2 a thin, flexible, electrically insulating film having a conductor region
3 adapted to mount an integrated circuit;
4 a plurality of traces in the conductor region; and
5 a plurality of lands coupled to the traces.

SUB D7 18. The electronic package substrate recited in claim 17, wherein the film is
2 formed of material from the group comprising a polymeric film, polyimide,
3 polyester, polyparabanic acid, epoxy, and fiberglass.

SUB A2 19. The electronic package substrate recited in claim 17, wherein the film
2 comprises a plurality of layers, each comprising a plurality of traces in the
3 conductor region.

1 20. The electronic package substrate recited in claim 17, wherein the lands are
2 arranged in a ball grid array. /A

SUB A3 21. An electronic package comprising:
2 an electrically insulating film having a thickness in the range of
3 approximately .15 to .90 millimeters, the film having a conductor region, a plurality
4 of traces in the conductor region, and a plurality of lands coupled to the traces; and
5 an electronic component having a plurality of pads coupled to the plurality
6 of lands.

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1 22. The electronic package recited in claim 21, wherein the film is formed of
2 material from the group comprising a polymeric film, polyimide, polyester,
3 polyparabanic acid, epoxy, and fiberglass.

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1 23. The electronic package recited in claim 21, wherein the film comprises a
2 plurality of layers, each comprising a plurality of traces in the conductor region, and
3 wherein each layer has a thickness within the range of approximately .15 to .30
4 millimeters.

1 24. The electronic package recited in claim 21, wherein the lands are arranged in
2 a ball grid array.

1 25. The electronic package recited in claim 21, wherein the electronic
2 component comprises an integrated circuit.

3 26. An electronic system comprising at least one electronic assembly
4 comprising:
5 a thin, flexible, electrically insulating film having a conductor region, a
6 plurality of traces in the conductor region, and a plurality of lands coupled to the
7 traces; and
8 an electronic component having a plurality of pads coupled to the plurality
9 of lands.

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1 27. The electronic system recited in claim 26, wherein the film is formed of
2 material from the group comprising a polymeric film, polyimide, polyester,
3 polyparabanic acid, epoxy, and fiberglass.

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1 28. The electronic system recited in claim 26, wherein the film comprises a
2 plurality of layers, each comprising a plurality of traces in the conductor region.

1 29. The electronic system recited in claim 26, wherein the lands are arranged in
2 a ball grid array.

1 30. The electronic system recited in claim 26, wherein the electronic component
2 comprises an integrated circuit.

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1 31. A data processing system comprising:
2 a bus coupling components in the data processing system;
3 a display coupled to the bus;
4 a memory coupled to the bus; and
5 a processor coupled to the bus and comprising an electronic assembly
6 including,
7 a thin, flexible electrically insulating film having a conductor region,
8 a plurality of traces in the conductor region, and a plurality of lands coupled
9 to the traces; and
10 an integrated circuit having a plurality of pads coupled to the
11 plurality of lands.

1 32. The data processing system recited in claim 31, wherein the film is formed
2 of material from the group comprising a polymeric film, polyimide, polyester,
3 polyparabanic acid, epoxy, and fiberglass.

1 33. The data processing system recited in claim 31, wherein the film comprises a
2 plurality of layers, each comprising a plurality of traces in the conductor region.

1 34. The data processing system recited in claim 31, wherein the lands are
2 arranged in a ball grid array.

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